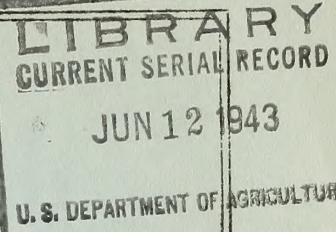


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SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for the

MISSOURI and ARKANSAS

DRAINAGE BASINS

May 1, 1943

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Issued by the
United States Department of Agriculture
Soil Conservation Service
Division of Irrigation
In Cooperation with
The Colorado Agricultural Experiment Station
Colorado State College
Fort Collins, Colorado

May 10, 1943

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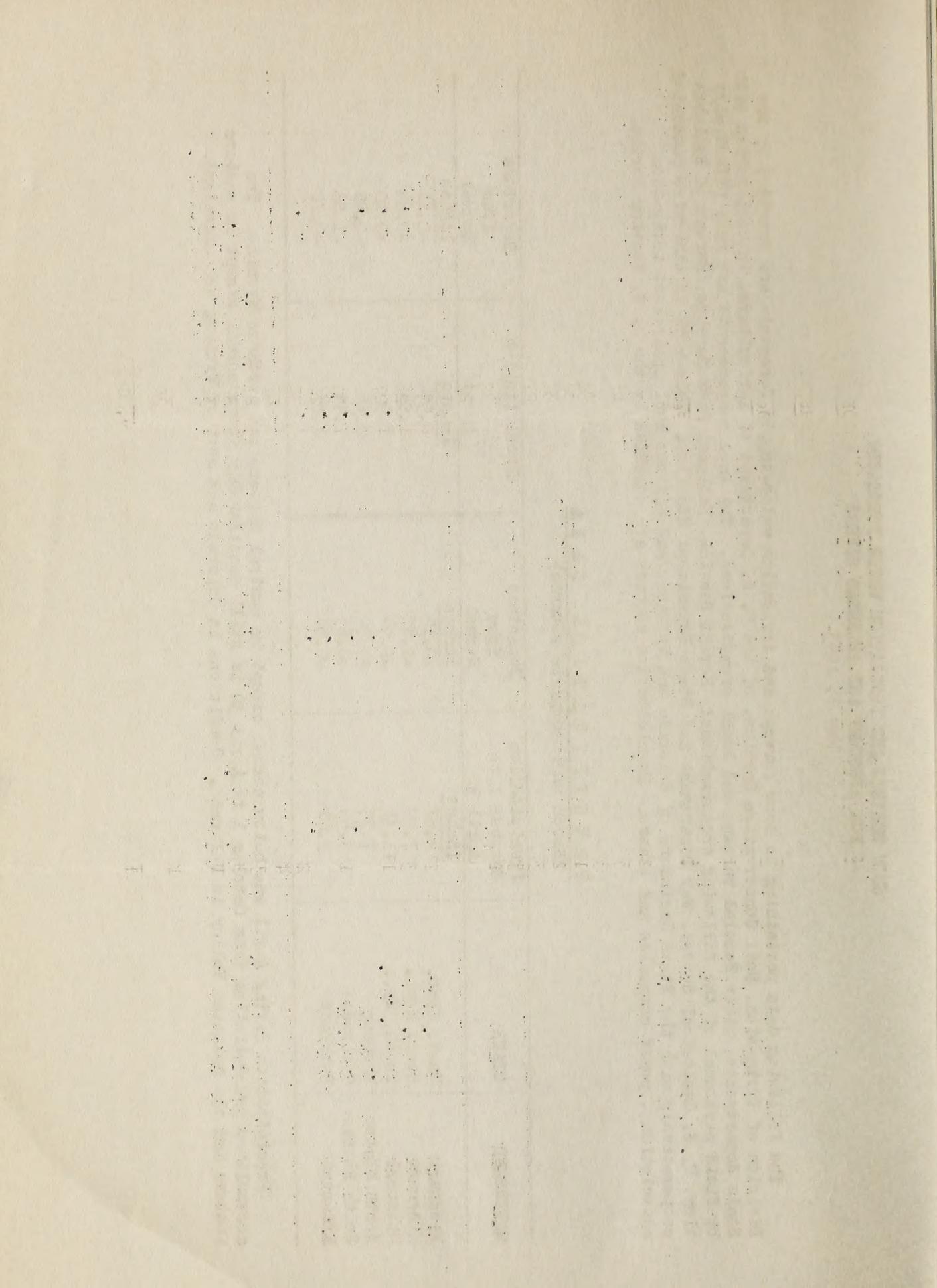
**SNOW SURVEYS AND IRRIGATION WATER FORECASTS
FOR MISSOURI AND ARKANSAS RIVERS**
May 1, 1943

The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by the Division of Irrigation, Soil Conservation Service, of the U. S. Department of Agriculture, in cooperation with State departments, other Federal bureaus and local organizations. The snow measurements are made principally by field personnel of the following organizations: Forest Service, National Park Service, Bureau of Reclamation, U. S. Geological Survey, War Department and State Experiment Stations. This work is otherwise conducted cooperatively with the State Engineers of Colorado and Wyoming, and various municipalities, irrigation associations, power companies and others. Precipitation records are supplied by the U. S. Weather Bureau.

PRECIPITATION DATA
(Based on incomplete returns)

WATERSHED	STATE	Precipitation October 1 to April 30	Departure from Normal		Precipitation April Inches	Departure from Normal Inches
			Inches	Inches		
Missouri	East. Mont.	4.67	-0.15		0.99	-0.11
Missouri	Cent. Mont.	7.20	+1.38		1.84	+0.64
Missouri	North. Wyo.	11.32	+2.94		1.99	+0.10
North Platte	Wyoming	7.79	+0.99		0.95	-0.40
South Platte	Colorado	9.63	+0.65		1.49	-1.06
Arkansas	Colorado	7.01	-0.60		1.27	-0.72

Precipitation during April was below normal except in central Montana and northern Wyoming. The accumulated precipitation from October 1 to April 30 is still considerably above normal except in eastern Montana and the Arkansas Valley in Colorado. Conditions in Colorado and most of Wyoming are excellent.

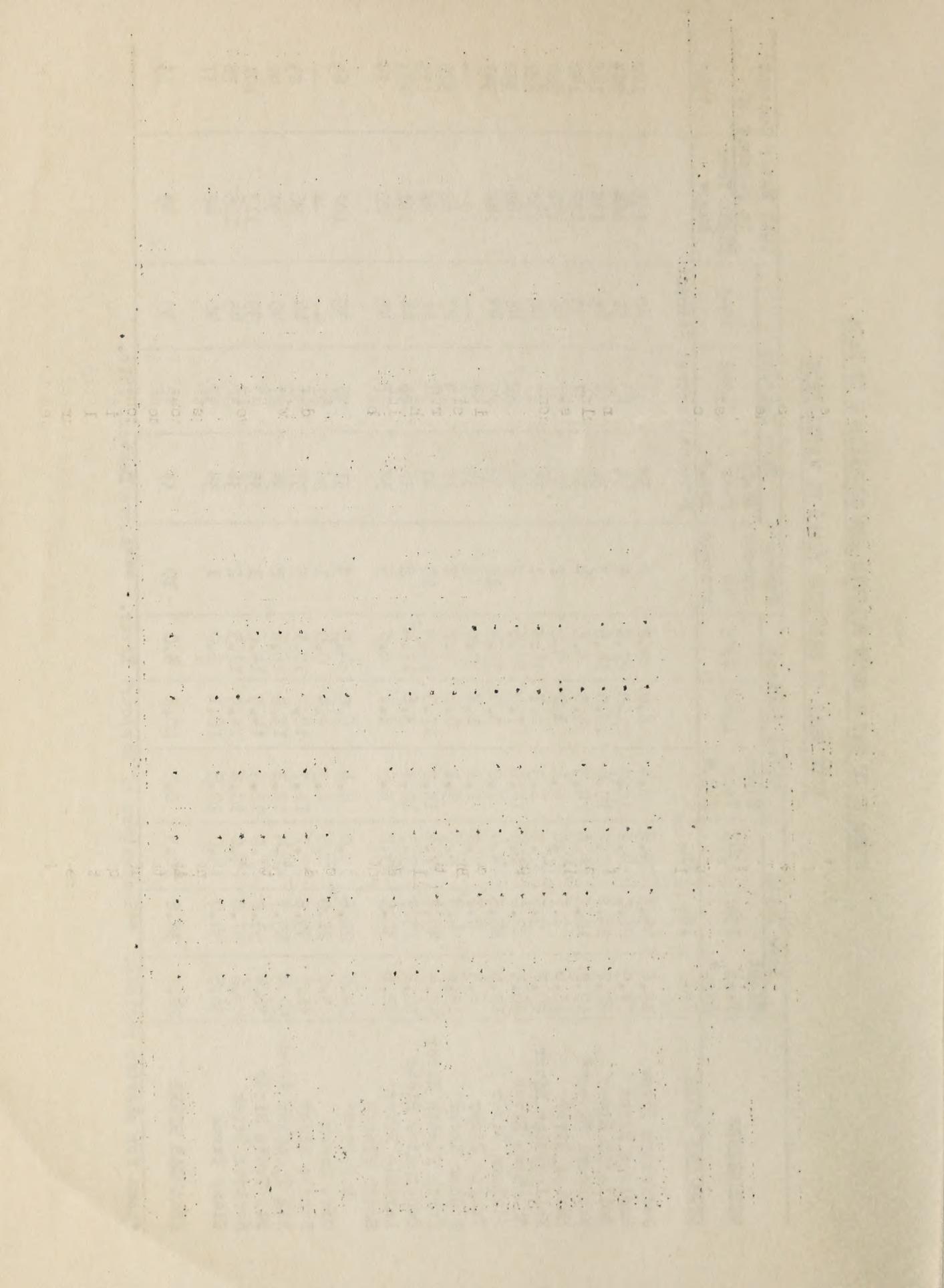


SUMMARY OF MAY 1 SNOW SURVEYS AND COMPARISON OF DATA
WITH THAT OF PREVIOUS YEARS BY WATERSHEDS

WATERSHEDS	Snow Depth				Water Content			Snow Density			1943 Water Content in percent of Eight Year Avg.*												
	Eight Year Avg.*	1942	1943	Eight Year Avg.*	In.	In.	1942	1943	Number courses in Average	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
MISSOURI RIVER																							
Jefferson River	19.6	25.3	24.6	6.4					2	33	32	40											
Madison River	37.9	26.1	54.2	16.9	11.0	27.8	5	45	42	51	45	153	153	153	153	153	153	153	153	153	153	153	153
Gallatin River	28.2	29.8	32.2	10.6	10.0	14.6	3	38	34	33	33	164	164	164	164	164	164	164	164	164	164	164	164
Missouri River**	12.8	10.8	16.9	4.3	4.0	5.6	4	34	37	37	37	138	138	138	138	138	138	138	138	138	138	138	138
Marias River	13.6	2.7	20.0	6.1	1.0	9.2	2	45	37	46	46	140	140	140	140	140	140	140	140	140	140	140	140
Yellowstone River	20.7	9.9	37.9	7.3	2.7	16.8	1	35	27	44	44	140	140	140	140	140	140	140	140	140	140	140	140
Shoshone River	36.5	22.0	51.5	14.6	7.0	24.6	2	40	32	48	48	168	168	168	168	168	168	168	168	168	168	168	168
Bighorn River	19.9	10.5	24.4	7.2	3.0	10.4	12	36	29	43	43	144	144	144	144	144	144	144	144	144	144	144	144
Tongue River	6.5	6.7	0.0	2.2	1.8	0.0	1	34	27	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Powder River	13.6	4.3	9.6	3.8	0.8	2.6	2	28	19	27	27	68	68	68	68	68	68	68	68	68	68	68	68
North Platte River	45.4	49.7	27.4	18.2	17.0	12.4	10	40	34	45	45	161	161	161	161	161	161	161	161	161	161	161	161
Sweetwater River	30.2	13.7	39.3	10.8	3.6	17.4	2	36	26	44	44	80	80	80	80	80	80	80	80	80	80	80	80
Laramie River	22.6	30.5	15.2	8.5	8.1	6.8	5	38	27	45	45	—	—	—	—	—	—	—	—	—	—	—	—
South Platte River***	14.0	21.6	13.0	4.4	6.5	4.5	3	31	30	35	35	69	69	69	69	69	69	69	69	69	69	69	69
Crow Creek	5.0	21.0	0.0	1.3	4.4	0.0	1	26	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Poudre River	31.5	39.8	22.7	11.7	12.2	10.1	5	37	31	34	34	86	86	86	86	86	86	86	86	86	86	86	86
Big Thompson River	54.4	65.7	41.4	18.3	18.0	16.6	2	34	27	40	40	91	91	91	91	91	91	91	91	91	91	91	91
St. Vrain River	36.4	53.0	37.0	12.9	14.5	14.6	1	35	27	39	39	113	113	113	113	113	113	113	113	113	113	113	113
Boulder Creek	29.6	47.0	25.0	10.8	14.9	11.3	2	36	32	45	45	105	105	105	105	105	105	105	105	105	105	105	105
Clear Creek	36.5	50.0	15.0	12.5	16.1	6.0	1	34	32	40	40	48	48	48	48	48	48	48	48	48	48	48	48
ARKANSAS RIVER	24.8	38.2	10.3	8.2	12.2	4.0	10	33	32	39	39	33	33	33	33	33	33	33	33	33	33	33	33

*Some for shorter periods. **Headwaters of Missouri River.

***Above Denver, Colo.



WATER SUPPLY OUTLOOK

Montana

Missouri River and Tributaries. The water content of the snow cover over the headwaters of the Missouri and its tributaries is very much in excess of that of last year and also above the past eight-year average as determined by recent snow surveys throughout the high mountain country of these drainage basins. Nearly 10 feet of snow was measured May first at Lewis Lake Divide, in Yellowstone Park, which contained over 5 feet of water. A heavy run-off is to be expected in the Missouri, likewise in its several tributaries, with stages approaching the limits of uncontrolled flow. The reservoir filling throughout the Missouri and tributaries in Montana is on the average very favorable with several now at full capacity and good prospects that practically all will reach spillway level. Soil moisture and range conditions are generally good.

Wyoming

Shoshone River. The water content of the snow on the Sylvan Pass course, within the Yellowstone Park, was 14.5 inches May first and a year ago it was 2 inches. The Shoshone Reservoir accumulated about 100,000 acre-feet during April and its full capacity will be reached before June first. Soil moisture throughout the cultivated areas of the Shoshone Valley and its tributaries is good, also crop and range conditions are good. No shortage in irrigation water supply is anticipated this season.

Big Horn River. The May first snow cover on the headwaters of this stream and its tributaries is approximately three times that of a year ago. At Brooks Lake the snow depth, May first, was six feet and contained almost 3 feet of water. Last year at this time the water content was 12 inches. The run-off in the Big Horn will be much above normal this season and all reservoirs will fill to capacity. Over the irrigated areas throughout the Big Horn basin the soil moisture is good to excellent and crop and range conditions good. Farming operations are slightly behind schedule. The water supply outlook for this season is the best in years.

Powder and Tongue Rivers. The snow cover, May first, on the watershed of these streams was nil due to deficiency of April precipitation and seasonal melting. The run-off in the Powder may be somewhat less than that anticipated a month ago and for the Tongue the seasonal irrigation supply will not exceed that of last year. The general soil moisture condition throughout these areas is fair to good with surface dry. Crop and range conditions are also fair to good but are showing need of precipitation. Reservoir filling is normal.

North Platte River. The water content of the snow over the headwaters of this stream is about three-quarters of that of last year at this time. At Old Battle and North French Creek snow courses the snow depth, May first, averaged more than five feet and contained about $2\frac{1}{2}$ feet of water, which is almost identical with that of a year ago. Snow at lower elevations has suffered a considerable reduction in water content during April due to deficiency in precipitation and melting caused by above-normal temperatures. Stream flow is expected to be above normal with peak of run-off 15 to 20 days prior to usual period of high water. During April the main reservoirs on the North Platte accumulated about 225,000 acre-feet. It is probable that the filling during May will approach 1,300,000 acre-feet with additional storage in June. A substantial run-off may be expected this season in the Sweetwater.

The general soil moisture condition throughout the North Platte Valley is fair to good; crops and range are also fair to good. Stream flow is much above normal in Nebraska and the river in North Park is rising rapidly.

Laramie River. The outlook for the coming season's water supply for the Laramie drainage is still favorable, and there will be sufficient water for irrigation requirements throughout the valley. During April, the water content of the snow cover was depleted somewhat due to melting which has brought the river to above normal stage for this time of year. The peak run-off will occur earlier this year than usual and it is expected that the flow will hold up well into the summer months. Soil moisture, crop, and range conditions are good.

Ground Water. There was little change in the ground-water levels in Wyoming during 1942. Conditions are normal on the Laramie River and Crow Creek and there was a slight gain along Lodge Pole Creek.

Colorado

South Platte River and Tributaries. Above-normal temperatures and deficient precipitation over the watershed of the upper South Platte drainage reduced the water content of the snow cover as shown by the recent snow surveys over this area. The mountain reservoirs in this drainage are all full except Antero which is expected to make further gains during the run-off season. For the tributaries the May first snow surveys indicate, on the whole, a loss in the water content due to melting during the past month. These streams are now rising and the crest of the run-off period will be from 15 to 20 days earlier this season. The run-off in the Boulder Creeks, St. Vrain and Thompson will be heavy and the accumulated flows into the lower South Platte will result in much water passing out of the state unused. The reservoir filling along the main South Platte and its several tributaries is now practically 100 percent. It is likely that a substantial carry-over in many of these reservoirs will be possible this year. The soil moisture over this large drainage area is now good to excellent. Crop conditions are especially good and about 10 days in advance of normal development. There will be ample water throughgout this area to meet all irrigation demands.

Ground Water. Generally the water table in the South Platte Basin is higher than last year especially on the tributaries where gains of from 2 to 8 feet are common. A few areas showed losses of a foot or less. The greatest general gains occurred in Prospect Valley, the Lone Tree Valley near Eaton and the Boulder Valley near Wellington.

Arkansas River. The run-off in the Arkansas this season from snow cover will not exceed that of last year. The early melting will advance the peak flow two to three weeks with the period of high stage extending over a relatively short time. It is expected that the river will maintain a fair to moderate flow well in the summer. Most all reservoirs, mountain and plain, now are at or near capacity with assurance that ample storage will be available to meet all irrigation needs. Generally throughout the valley the soil moisture is good with crops well advanced.

Ground Water. In the Arkansas Valley the water table is higher than at this time last year. Gains up to $2\frac{1}{2}$ feet are shown by some wells. The greatest increases occurred at Rocky Ford and Vineland.

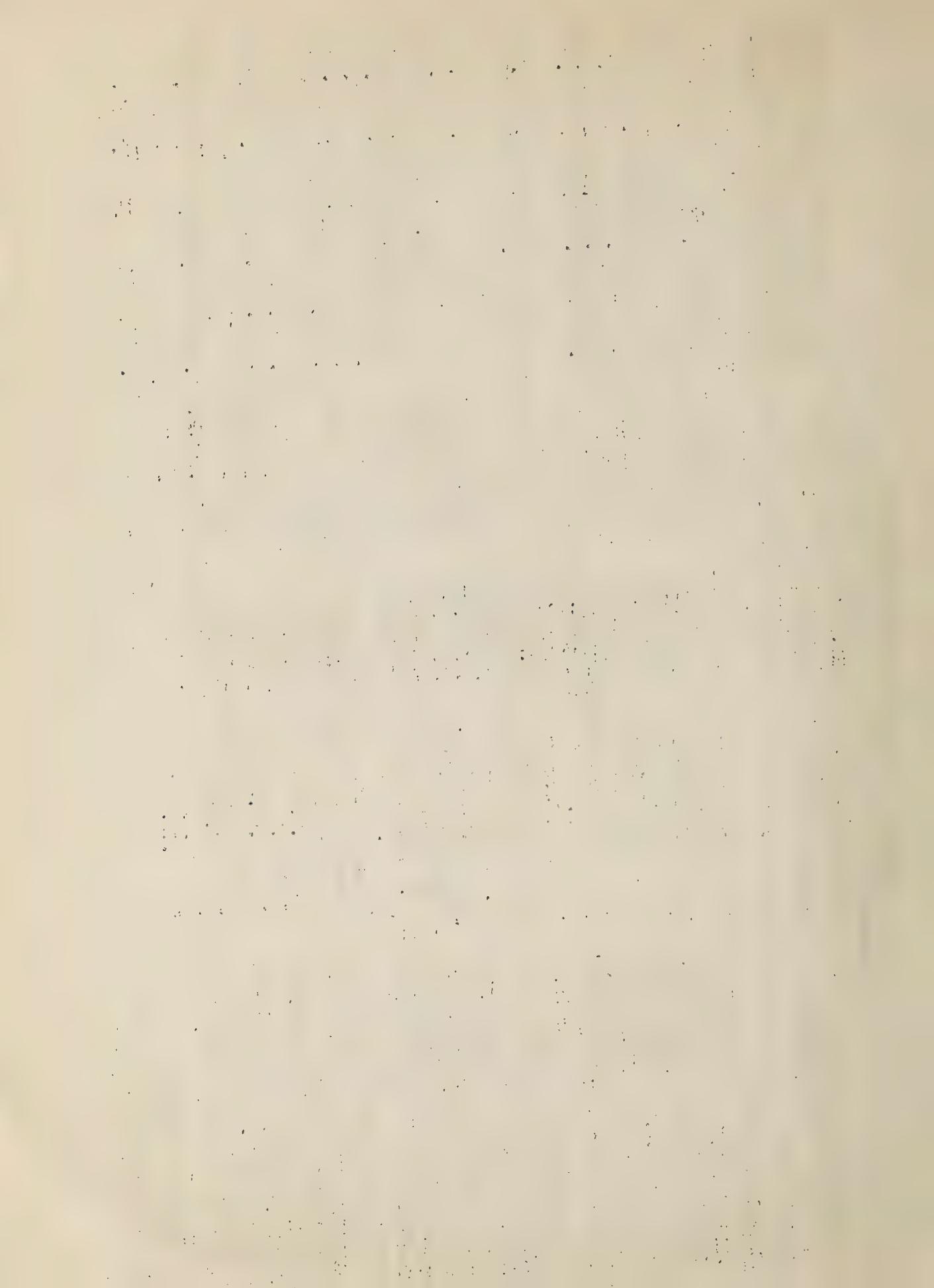
MISSOURI AND ARKANSAS RIVER WATERSHEDS

Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1943, at Fort Collins, Colorado

Main Drainage and Snow Course No.	Local Drainage	Location State	Locality	Description	Elev.	National Forest	May 1		Snow Course Measurements	
							Av. @ 1942	Av. @ 1943	Av. Water Content	
									In.	In.
JEFFERSON RIVER										
6 Camp Creek*	Red Rock Cr.	Idaho	6mi.N.Spencer	21-13N-36E	6800	Targhee			5.7	0.0
7 Moose Creek*	N.Fk.Bighole	"	3mi.S.Gibbons P.	27-27N-21E	6200	Salmon			—	30.0
7 East Fork R.S.*	Rock Creek	Mont.	13mi.NE.Sula	16-2N-17W	5400	Bitterroot	0.0	—	0.0	1.4
10 Gibbons Pass	N.Fk.Bighole	"	Gibbons Pass	4-2S-19W	7100	DeerLodge	42.0	—	60.0	18.1
30 Pipestone Pass	Pipestone Cr.	"	Pipestone Pass	11-1N-7W	7200	BeaverHead	4.8	7.4	4.3	2.0
Elkhorn Hot Spgs	Wise River	"	8mi.N.Polaris	15-4S-12W	8450	DeerLodge	34.3	—	—	—
31 Storm Lake	Seymour Cr.	"	15mi.W.Anaconda	19-4N-13W	8100	Average for Drainage	19.6	43.2	44.9	11.5
MADISON RIVER										
2 Aster Creek*	Firehole R.	Wyo.	Lewis Lake	44-3N110-6W	7700	Yel.Nat.P.	64.2	448.2	498.4	428.4
8 Lewis L. Divide*	"	"	3mi.S.Lewis L.	44-2N110-7W	7900	"	90.5	63.8	13.0	41.5
11 Norris Basin	Gibbon River	"	Norris Basin	44-3N110-7W	7500	"	"	"	28.5	50.8
3 Big Springs*	South Fork	Idaho	Big Springs	34-14N-44E	6500	Targhee	—	—	—	62.5
16 West Yellowstone	South Fork	Mont.	W.Yellowstone	34-13S-7E	6700	Gallatin	7.9	1.6	16.7	2.8
Twenty-one Mile	Greyling Cr.	"	1-11S-5E	22-11S-3E	7150	Yel.Nat.P.	21.2	16.4	35.8	9.2
Hebgen Dam	Cabin Creek	"	8mi.S.Gallatin	22-11S-3E	6550	Gallatin	5.9	0.6	2.2	2.4
GALLATIN RIVER						Average for Drainage	37.9	26.1	54.2	16.9
Devil's Slide	Hyalite Cr.	Mont.	20mi.S.Bozeman	14-5S-6E	8100	Gallatin	54.4	62.2	55.9	19.7
Hood Meadow Extn.	"	"	"	22-4S-6E	6600	"	9.0	10.7	4.8	20.4
Mystic Lake No.1	Bozeman Cr.	"	12mi.SE.	31-3S-7E	6500	"	—	—	2.8	3.1
Mystic Lake No.2	"	"	"	31-3S-7E	6600	"	—	—	—	1.7
Twenty-One Mile	Gallatin R.	"	8mi.S.Gallatin	1-11S-5E	7150	Yel.Nat.P.	21.2	16.4	35.8	9.2
Ross Peak	Ross Cr.	"	12mi.N.Bozeman	10-1N-6E	7000	Gallatin	—	—	—	—
New World Trail	Gallatin River	"	8mi.SE.	13-3S-6E	7000	Average for Drainage	28.2	29.8	32.2	10.0

*On adjacent drainage

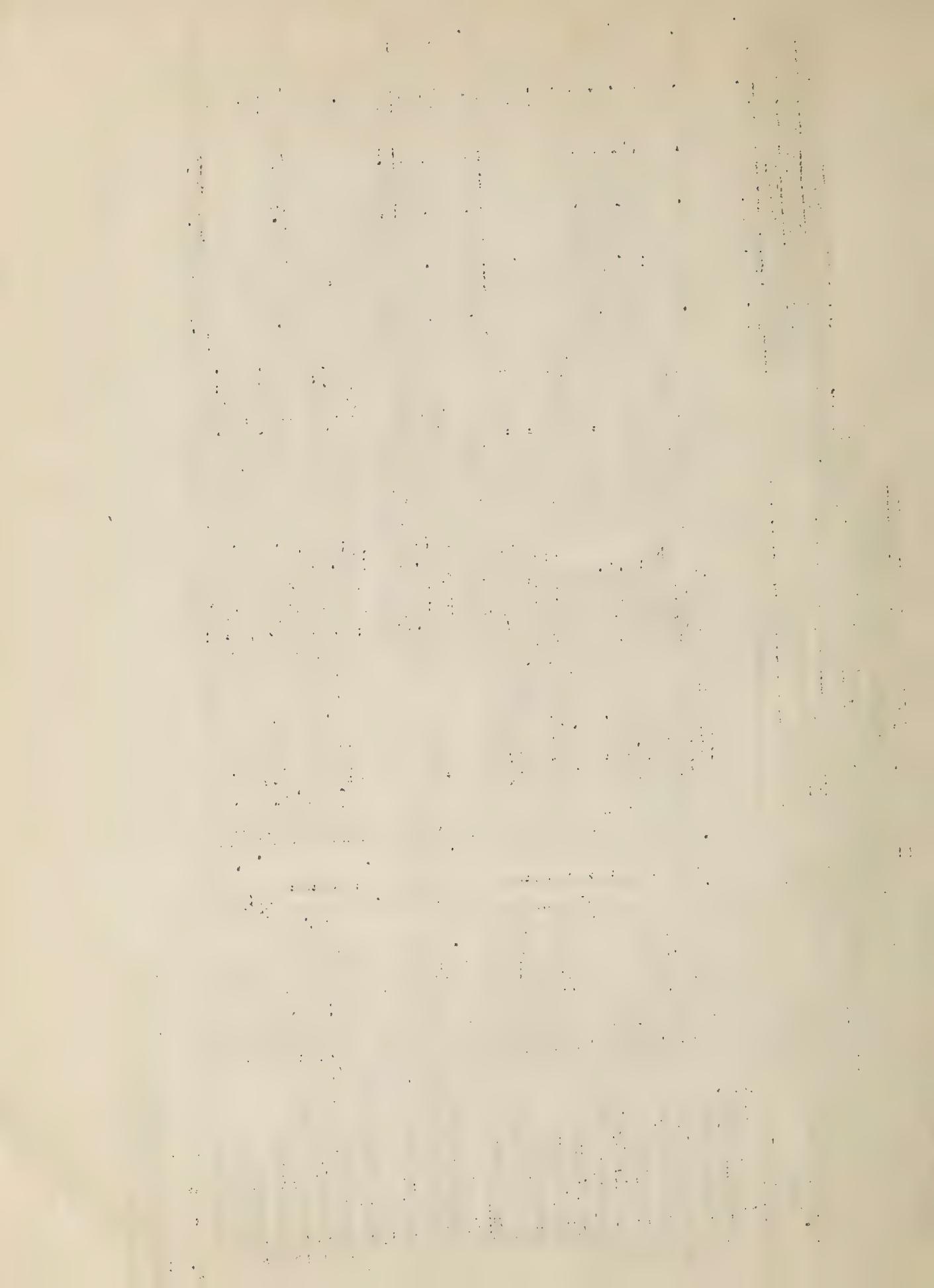
Average for period of record
April 15 Readings.



MISSOURI AND ARKANSAS RIVER WATERSHEDS
Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1943, at Fort Collins, Colorado.

Main Drainage and Snow Course No.	Local Drainage	State	Location Locality	Descrip- tion	Elev. Forest	National		May 1 Snow Course Measurements		Av. Water Content In. In.		
						Av. Depth 1942 Av. E.	1943 Av. E.	1942 Av. E.	1943 Av. E.			
MISSOURI RIVER (Headwaters)												
6 Chessman Res.	Tenmile	Mont.	11mi. SW. Helena	6200	Helena	3.2	1.0	6.2	0.9	0.3	1.4	
11 Goat Mountain	South Fork	"	2 mi. W. Gilman	7000	Lewi & Clark	--	--	28.2	4.5	--	9.8	
36 Temple Pass	Canyon Creek	"	Steagle Pass	6900	Helena	13.9	2.6	7.8	1.1	0.8	1.9	
41 Tenmile Cr. Lower	Tenmile	"	17mi. SW. Helena	6250	"	4.2	16.2	23.5	5.8	5.5	7.9	
42 Tenmile "Middle	"	"	"	6800	"	17.5	23.6	30.0	9.3	9.4	11.0	
43 Tenmile Cr. Upper	"	"	"	3000	"	26.3	--	--	--	--	--	
Grasshopper	Gr.	"	6mi. S.W. S. Spgs.	7000	Lewis & Clark	--	--	--	--	--	--	
King's Hill	Belt Creek	"	19-9N-8E	7950	"	"	--	--	--	--	--	
Orville Harris	Musselshell R.	"	35-13N-7E	6500	"	"	--	--	--	--	--	
Half Moon	Judith River	"	31-10N-9E	6000	"	"	--	--	--	--	--	
MARIAS RIVER												
7 Desert Mountain*	Gutbank Cr.	Mont.	4mi. S. Belton	5600	Flathead	15.4	4.2	17.8	6.5	1.4	7.7	
20 Marias Pass	Two Medicine	"	Summit	48-31N-19W	5250	Glacier NP	11.8	1.2	22.2	5.7	0.5	10.6
Average for Drainage												
11-31N-14W	Average for Drainage	"	"	13.6	2.7	20.0	6.1	6.1	1.0	1.0	9.2	
YELLOWSTONE RIVER												
14 Dome Lake	Goose Creek	Wyo.	Dome Lake	8800	Big Horn	10.7	--	--	--	2.8	--	
40 Lupine Creek	Lupine Creek	"	11-53N-87W	14-9N-110-6W	Yel. Nat. P.	"	"	"	"	"	"	
41 Blacktail Deer Cr.	Blk. Tail Deer	"	"	44-9N-110-6W	"	"	"	"	"	"	"	
43 Lodge Pole	Lodge Pole Cr.	"	11mi. N.W. Cody	32-56N-106W	Shoshone	20.7	9.9	37.9	7.3	2.7	16.8	
3 Canyon	Tower Creek	"	34mi. N.W. Canyon Jct	44-7N-110-5W	Yel. Nat. P.	12.4	12.4	12.4	3.5	3.5	--	
Cook City	Soda Bottle Cr.	Mont.	Cook City	25-9S-14E	Absaroka	"	"	"	"	"	--	
7 Lake Camp	Yellowstone	Wyo.	3mi. N.E. Fishing Br.	44-6N-110-4W	Yel. Nat. P.	13.3	13.3	4.0	4.0	2.7	16.8	
Average for Drainage												
20.7	9.9	37.9	7.3	20.7	9.9	37.9	7.3	7.3	2.7	2.7	16.8	

*Adjacent Drainage
@Average for period of record



-7-
MISSOURI AND ARKANSAS RIVER WATERSHEDS

Summary of Federal and State Cooperative Snow Surveys
 Issued May 10, 1943, at Fort Collins, Colorado.

Main Drainage and Snow Course No.	Local Drainage	Location		Elev. National Forest	May 1 Snow Cover Measurements						
		State	Locality		Description	Av. @ 1942	1943				
SHOSHONE RIVER	Middle Cr. Hardpan Cr. Shoshone R.	Wyo. " " " " " " " "	Sylvan Pass 27mi. SW. Cody Brooks Lake	12-52N-110W 25-51N-106W 23-44N-110W	7100 9500 9200	Yel. Nat. Shoshone Washakie	4.5 29.9 53.9 36.5	7.3 -- 72.7 21.9 14.6	2.0 8.1 12.0 7.0	14.5 34.7 24.6	
	Average for Drainage						51.5				
BIGHORN RIVER	Tensleep R.S. Ranger Creek Dome Lake*	Wyo. " " " " " " " "	Tensleep Cr. Ranger Creek Shell Cr. Popo Agie R. Popo Agie R. L. Popo Agie R. Wood River	30-49N-86W 32-53N-88W 11-53N-87W 3-31N-101W 23-31N-101W 13-30N-101W 28-46N-103W 3-42N-109W	8300 6800 8800 8500 " " " " " " " "	Bighorn Bighorn Bighorn Mashakie " " " " " " " "	9.9 19.3 11.1 10.7 3.0 28.5 30.7 30.0 7.5 1.5 2.3 " " " " " " " "	0.6 19.8 6.3 -- 7.0 34.2 41.6 41.5 6.8 2.2 0.0 " " " " " " " "	3.7 3.9 2.8 -- 3.7 9.3 10.6 14.5 6.8 2.2 4.1 7.2 7.5 28.2 34.0 9.5 7.1 16.3 7.2	1.9 3.9 2.8 -- 4.7 12.8 3.7 18.0 0.6 2.3 0.0 12.0 1.6 11.2 13.6 12.3 8.5 10.4	0.1 7.0 -- -- 2.4 2.4 12.8 18.0 2.3 2.3 0.0 34.7 1.6 11.2 13.6 12.3 8.5 10.4
	Average for Drainage										
	13 Tensleep R.S. 16 Ranger Creek 14 Dome Lake* 45 Sawmill Glade 46 Blue Ridge 47 South Pass 48 Wood River 49 Sheridan Cr.R.S. #2 Sheridan Cr. 50 Brooks Lake #3 Wind River 51 St. Lawrence R.S. St. Lawrence Cr. 52 Mosquito Park R.S. Trout Creek 53 DuNoir 54 T-Cross Ranch	Wyo. " " " " " " " "	Dome Lake 20mi. SW. Sheridan 453N-86W	11-53N-87W 11-53N-86W	8800 7700	Bighorn Bighorn	-- 6.5	10.7 0.0	-- 2.2	2.8 1.8	
	Average for Drainage										
TONGUE RIVER	Dome Lake Big Goose Cr.R.S.	Wyo. " " " " " " " "	Goose Cr. E. Goose Cr.	11-53N-87W 11-53N-86W	8800 7700	Bighorn Bighorn	-- 6.7	-- 0.0	-- 2.2	-- 1.8	
	Average for Drainage										
POWDER RIVER	Middle Fork Sour Dough	Wyo. " " " " " " " "	Middle Fork Sour Dough Cr.	18-43N-85W 17-49N-84W	7500 8500	Off Forest Bighorn	10.1 17.1 13.6	2.6 6.0 4.3	0.4 18.8 9.6	0.1 5.0 0.8	
	Average for Drainage										
30 Red Fork 31 Sour Dough	23mi. W. Kaycee 10mi. W. Klondike	Wyo. " " " " " " " "									

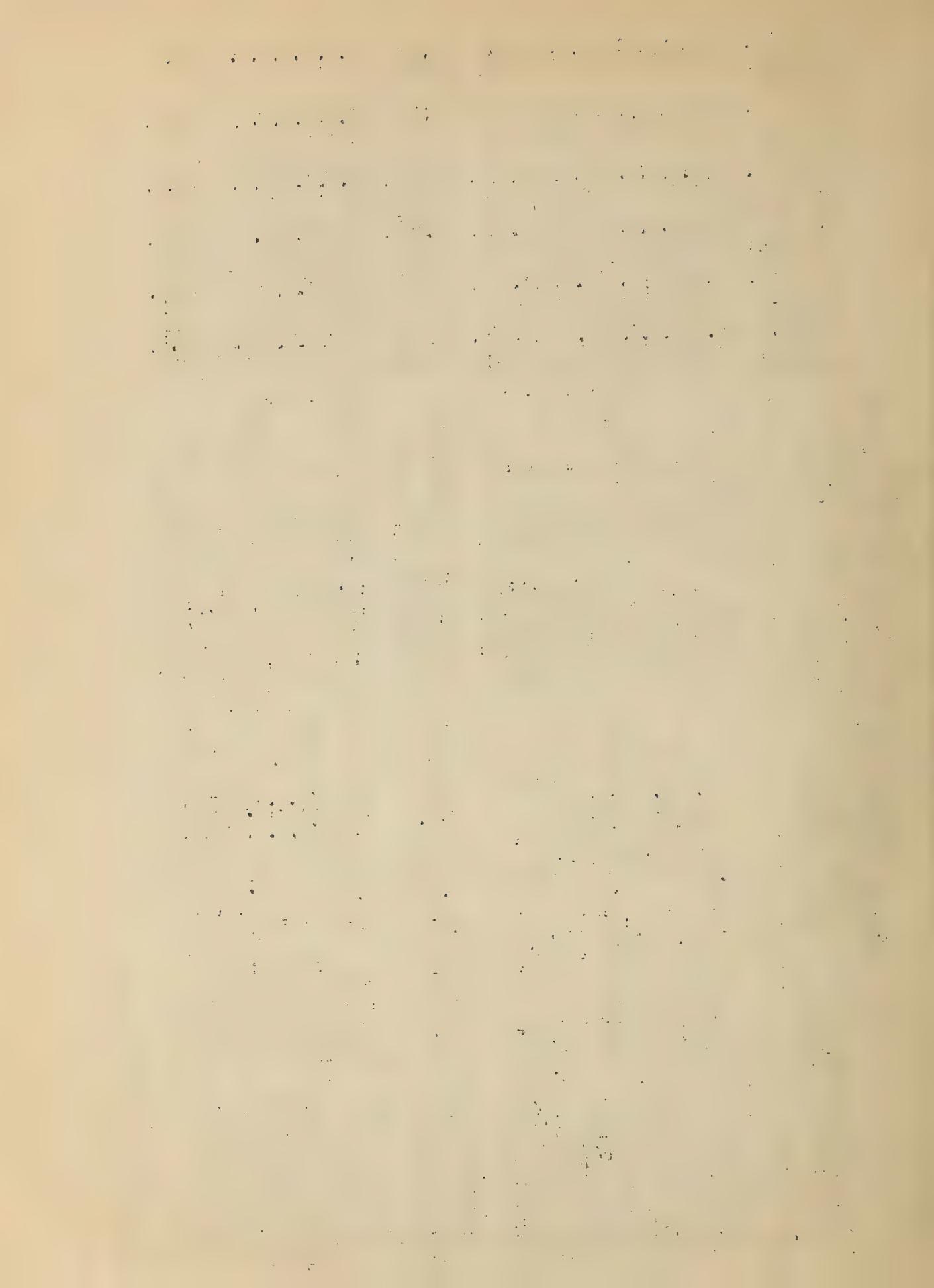
*On adjacent drainage
 @Average for period of record
 E Estimated

MISSOURI AND ARKANSAS RIVER WATERSHEDS
 Summary of Federal and State Cooperative Snow Surveys
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Main Drainage and Snow Course	Local Drainage	State	Locality	Description	May 1 Snow Cover Measurements				
					Av. 1942		Av. 1943		Av. Water Content
					In.	In.	In.	In.	In.
NORTE PLATTE RIVER									
1 Cameron Pass	Michigan Cr. Colo.		Cameron Pass	2-6N-76W	10300	Roosevelt	61.4	66.1	22.0
7 Park View	Illinois Cr.	"	7 mi. SE. Rand	24-5N-78W	9200	Routt	18.8	32.2	9.8
8 Columbine Lodge	Grizzly Cr.	"	Rbt. Ears Pass	21-5N-82W	9300	"	43.2	29.0	18.1
51 Big Creek Lake	Big Creek	"	5 mi. SW. Pearl	9-11N-82W	9000	"	14.2	4.7	4.6
62 Willow Creek P.*	Illinois Cr.	"	Willow Cr. Pass	1-4N-78W	9500	Arapaho	33.8	42.0	13.1
7 Bottle Creek	Encampmt Cr. Wyo.	"	7 mi. SW. Encampmt	24-14N-85W	8200	Medicine Bow	20.4	23.1	4.4
8 Webber Spring	"	"	10 mi. W.	27-14N-85W	9000	"	43.9	40.8	26.9
9 Old Battle	"	"	12 mi. W.	29-14N-85W	9800	"	77.8	82.5	62.1
37 North French Cr.	N. French Cr.	"	Cent./Saratoga	27-16N-80W	10200	"	81.8	89.2	65.3
38 N. Barrett Cr. #2	Barrett Cr.	"	"	30-16N-80W	9400	"	55.0	52.0	34.9
39 Ryan Park #2	"	"	"	34-16N-81W	8400	"	17.5	19.6	0.0
SWEETWATER RIVER									
29 Grannier Meadows	Rock Creek	Wyo.	20 mi. SW. Lander	19-30N-100W	9000	Washakie	29.8	12.9	10.9
47 South Pass*	"	"	19 mi. "	13-30N-101W	9000	"	30.7	14.5	41.6
LARAMIE RIVER									
3 Brooklyn Lake	Nash Fork	Wyo.	7 mi. NW. Centennial	11-16N-79W	10200	Medicine Bow	52.9	57.9	21.8
11 Fox Park	Fox Creek	"	Fox Park	21-13N-78W	9200	"	18.1	28.6	3.5
34 Pole Mountain #2*	Soldier Cr.	"	10 mi. SE. Laramie	35-15N-72W	8700	"	5.0	21.0	0.0
35 Libby Lodge #2	Libby Creek	"	3 mi. NW. Centennial	29-16N-78W	8700	"	8.6	13.7	4.4
36 Hairpin Tunnels #2	"	"	5 mi. NW.	24-16N-79W	9500	"	28.6	31.4	2.8
4 W. Port-G-P Tunnel	Laramie R.	Colo.	4 mi. N. Chambers I.	7-8N-75W	8600	Roosevelt	10.7	--	0.0
50 Deadman Hill*	Deadman Cr.	"	10 mi. W.R. Feather	26-10N-75W	10200	"	--	--	3.7
71 Deadman Hill #2*	Deadman Cr.	"	8 mi. SW."	6-9N-74W	10200	"	--	--	7.1
88 Roach	LaGarde Cr.	"	8 mi. NW. Glendovey	5-10N-77W	9800	"	--	--	0.0
Average for Drainage									
							51.2	42.8	19.2
							22.6	30.5	15.2
Average for Drainage									
							5.2	8.5	6.8

*On adjacent drainage

©Average for period of record

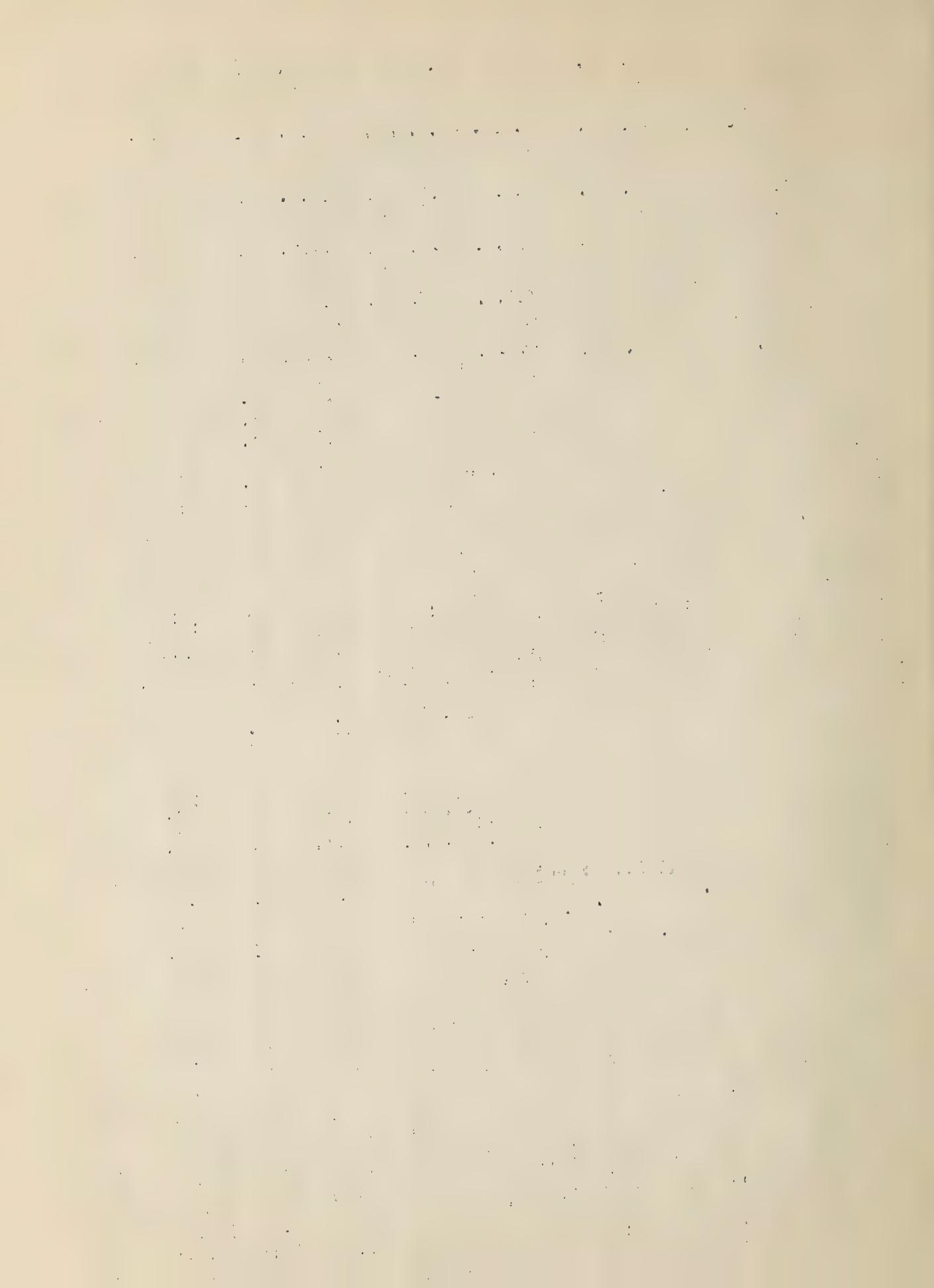


MISSOURI AND ARKANSAS RIVER WATERSHEDS
Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1943, at Fort Collins, Colorado

Main Drainage and Snow Course No.	Local Drainage	Location	Elev.	National		May 1 Snow Cover Measurements		
				Forest	In.	Avg.	Snow Depth	Av. Water Content
14 Hoosier Pass	S. Platte R. Colo.	Hoosier Pass	11400	Pike	31.0	43.4	24.0	10.1
15 Fairplay	" " " " Jefferson Cr.	Fairplay	10000	"	0.0	0.0	0.0	0.0
83 Jefferson Cr. #2	" " " " " "	5mi.N.W.Jefferson	10100	"	11.0	21.4	14.9	3.0
34 Pole Mountain #2	Crow Creek Wyo.	10mi.S.E.Laramie	8700	Average for Drainage	14.0	21.6	13.0	4.7
POUDRE RIVER				MedicineBow	5.0	21.0	0.0	0.0
1 Cameron Pass	JoeWright Cr.Colo.	Cameron Pass	10300	Roosevelt	61.4	66.1	40.0	23.8
2 Chambers Lake	Poudre River "	Chambers Lake	9000	"	8.6	16.7	1.4	3.2
3 Big South	" " " " " "	2mi.E.Chambers L	8600	"	0.9	6.1	0.0	0.2
50 Deadman Hill	No.Poudre R.	26-10N-75W	10200	"	--	--	--	1.7
65 Lake Irene*	Big S.Poudre	8-5N-75W	10600	Ry.Mtn.N.P.	64.8	74.8	48.8	23.8
68 Four Glass Lake	L.S.Poudre	18-7N-73W	9500	Roosevelt	21.6	35.3	23.4	7.6
71 Deadman Hill #2	N.Poudre R.	6-9N-74W	10200	"	--	--	--	10.2
BIG THOMPSON				Average for Drainage	31.5	39.8	22.7	11.7
65 Lake Irene*	Big Thompson R.Colo.	1mi.SW.Milner F.	10600	Ry.Mtn.N.P.	64.8	74.8	48.8	23.8
95 Hidden Valley #2	Hidden Valley Cr.	9mi.W.Estes P.	10200	" " " "	44.1	56.6	33.9	12.8
ST. VRAIN RIVER				Average for Drainage	54.4	65.7	41.4	18.3
41 Wild Basin	N.St.VrainR.Colo.	5mi.W.Allens F.	10000	Ry.Mtn.N.P.	36.4	53.0	37.0	12.9
BOULDER CREEK								14.5
5 E.Port.Moffat I.	S.BoulderCr.Colo.	24-3N-74W						14.6
60 University Camp #2	N.BoulderCr.	East Portal	9400	Roosevelt	4.6	22.0	0.0	1.3
	"	5mi.SW.Ward	10300	"	54.7	72.0	50.0	20.3
		Average for Drainage			29.6	47.0	25.0	10.8

*On adjacent drainage

①Average for period of record



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Issued May 10, 1943, at Fort Collins, Colorado

Main Drainage and Snow Course No.	Local Drainage	Location		Elev. Forest	National Forest	May 1 Snow Cover Measurements							
		State	Locality			Description	Av. Depth In.	Snow Depth In.	Av. @ 1942 In.	Av. @ 1943 In.	Av. Water Content In.		
CLEAR GREEK 61	Loveland Pass #2	Clear Creek	Colo.	10mi.W.Georgetown	27-4S-76W	10100	Arapaho	36.5	50.0	15.0	12.5	16.1	
ARKANSAS RIVER													
19 Tennessee Pass	Tennessee Cr.	Colo.	Tennessee Pass	21-8S-80W	10200	Cochetopa	14.3	22.2	0.0	4.7	5.9	0.0	
21 Twin Lakes Tun.	Twin Creek	"	9mi.W.Twin Lakes	22-11S-82W	10500	"	24.0	38.8	14.1	7.8	11.1	5.2	
42 Marshall Creek*	Marshall Cr.	"	24-48N-6E	10800	"	40.5	45.4	11.7	9.9	13.5	4.9	4.9	
43 Poncha Creek	Poncha Creek	"	"	10500	"	21.0	40.5	1.5	7.5	12.9	0.8	0.8	
72 Whiskey Creek #2	Whiskey Cr.	"	Whiskey Cr.Pass	37-2N105.2W	10300	Maxwell Gr.	15.1	29.7	0.0	5.6	10.6	0.0	0.0
74 LaVeta Pass#2*	Cuchara Cr.	"	LaVeta Pass	22-28S-70W	9300	San Cristo Gr.	8.6	29.0	0.0	3.3	11.3	0.0	0.0
78 Four Mile Park #2	Lake Creek	"	3mi.SW.Twin L.	23-11S-81W	9700	Cochetopa	0.9	0.0	0.0	0.3	0.0	0.0	0.0
79 Fremont Pass #2	E.Fork Ark.R.	"	Fremont Pass	2-8S-79W	11400	Arapaho	49.6	63.4	46.9	17.0	19.2	17.6	17.6
81 Blue Lakes #2	Cuchara Cr.	"	15mi.SW.LaVeta	30-31S-69W	10000	San Isabel	18.2	37.2	0.8	6.6	13.5	0.2	0.2
92 Monarch Pass	S.Fork Ark.R.	"	Monarch Pass	16-49N-6E	10500	Cochetopa	25.8	75.8	28.3	19.8	23.7	11.1	11.1
							24.8	38.2	10.3	8.2	12.2	4.0	4.0

*On adjacent drainage @ - Average for period of record

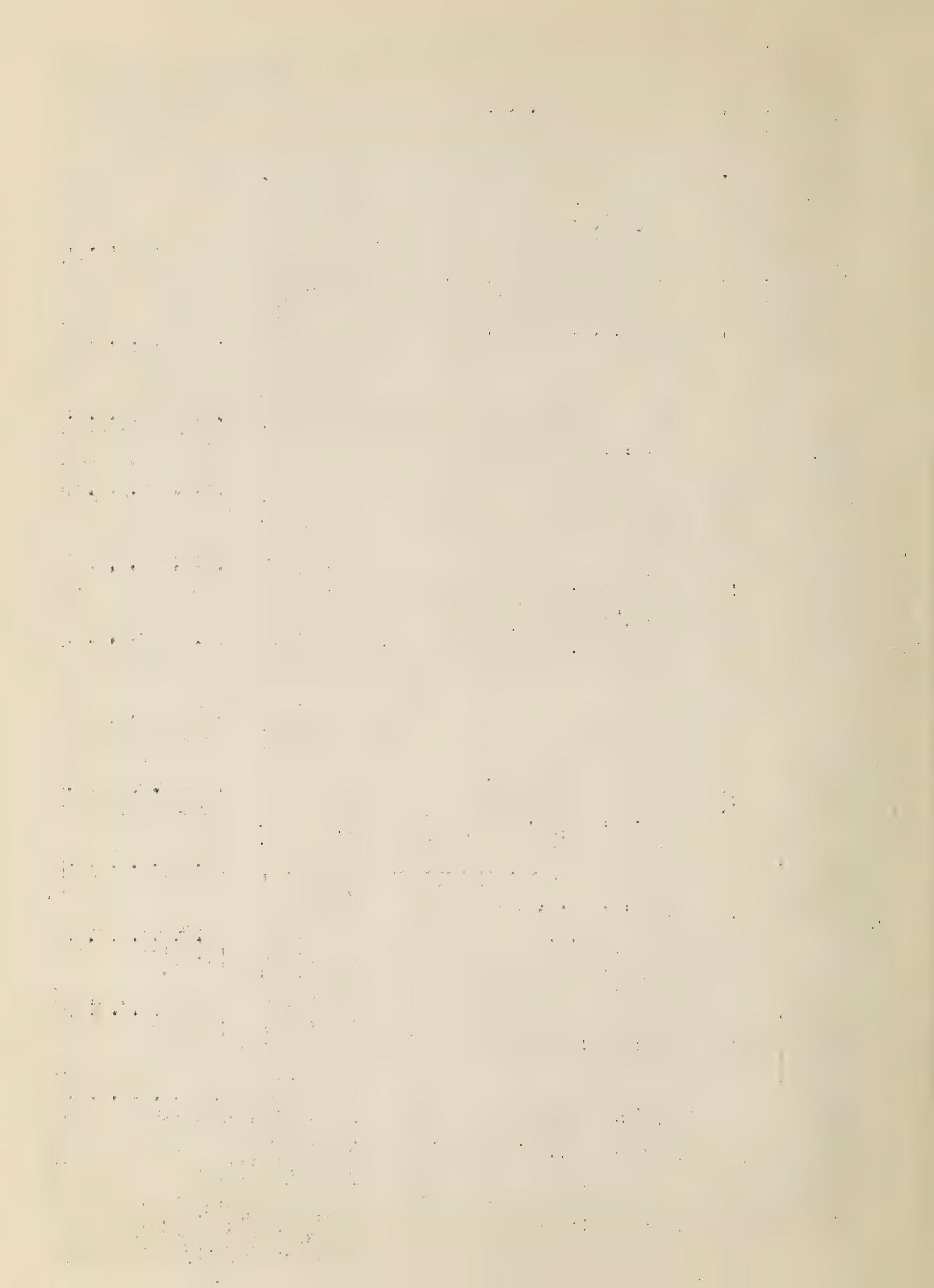
RESERVOIR STORAGE

Reservoir Storage in Thousands of Acre-Feet, Colorado and Wyoming, as of May 1, for the years 1934 to 1943, inclusive. (Based on data gathered by State Engineer of Colorado, U.S. Bureau of Reclamation and other agencies)

A = Percentage of capacity. B = Percentage of 10-year average. C = Percentage of filling forecast for 1943.

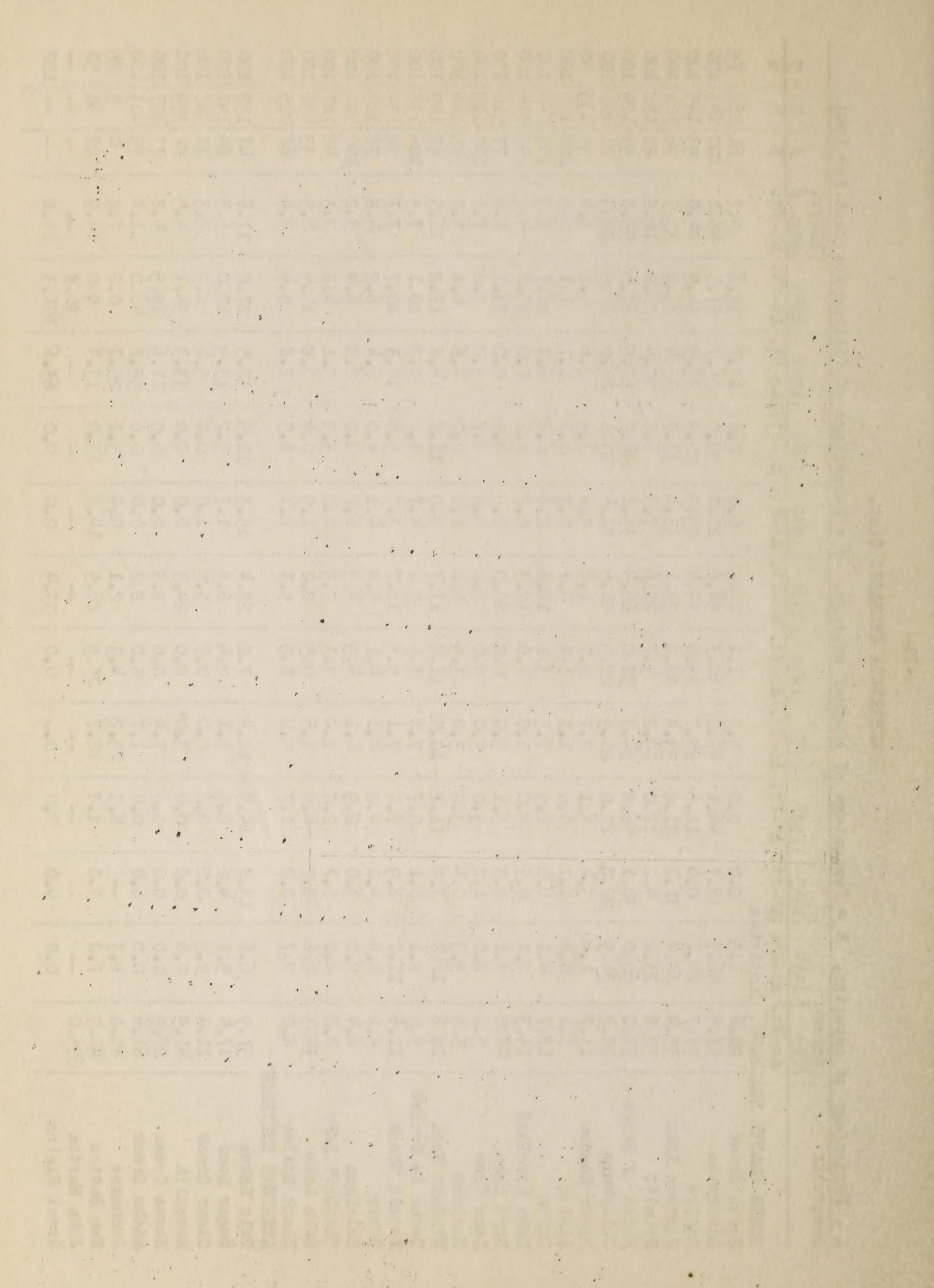
Reservoir Capacity	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	10 yr.Avg./P			
											Ac-ft.	Ac-ft.	Ac-ft.	%
SOUTH PLATTE DRAINAGE														
Eleven Mile	81.9	—	4.8	16.4	27.4	66.8	70.5	81.9	81.9	81.9	54.0	52.4	100	152
Cheeseman	79.0	43.4	18.7	32.0	48.7	34.4	79.1	59.8	49.7	79.1	100	100	100	100
Marston	18.9	17.1	13.8	14.2	16.7	15.4	16.6	16.6	15.4	15.6	83	85	99	100
Barr	32.2	17.8	7.4	11.4	20.0	13.3	25.6	11.0	10.5	28.6	17.3	17.3	158	100
Milton	24.4	10.5	1.8	3.5	11.0	4.0	15.9	3.9	4.4	19.6	9.4	9.4	80	208
Standley	18.5	0.0	2.8	13.4	15.8	12.2	15.7	8.1	11.3	17.9	11.4	11.4	92	149
Marshall	10.3	3.1	0.1	4.1	6.0	6.2	1.6	5.4	8.7	3.1	4.5	30	69	100
Antero	33.0	0.0	0.0	0.0	0.0	0.0	11.5	11.1	0.0	13.0	5.9	72	403	100

*Some averages for shorter periods.



RESERVOIR STORAGE, Cont.

A = Percentage of capacity. B = Percentage of 10-Year average. C = Percentage of filling forecast for 1943.



RESERVOIR STORAGE, Cont.

Reservoir	A = Percentage of capacity.			B = Percentage of 10-year average.			C = Percentage of filling forecast for 1943.									
	Capacity Ac-ft.	1934 Ac-ft.	1935 Ac-ft.	1936 Ac-ft.	1937 Ac-ft.	1938 Ac-ft.	1939 Ac-ft.	1940 Ac-ft.	1941 Ac-ft.	1942 Ac-ft.	1943 Ac-ft.	10-yr. Avg. ^b	10-yr. Avg. ^b	A	B	C
ARKANSAS DRAINAGE, Continued																
Model	2.7	0.0	2.6	1.8	3.0	8.5	1.3	5.3	9.1	6.4	4.1	--	156	100		
NORTH PLATTE DRAINAGE																
Pathfinder	1070.0	331.8	133.2	263.5	343.8	352.8	430.3	77.7	92.0	261.9	318.6	260.6	30	122	50	
Guernsey	72.7	37.6	24.8	44.7	37.5	52.5	42.0	47.1	50.3	49.5	44.8	43.1	62	104	100	
Seminole	1020.0	--	--	--	--	0.0	85.5	66.6	98.8	160.8	343.9	151.1	34	227	75	
Alcova	165.8	--	--	--	35.0*	99.4	123.5	92.8	74.3	133.4	120.4	107.3	73	112	100	
Wheatland	70.4	--	--	--	20.9	26.1	51.0	9.0	17.7	30.0	56.0	28.7	80	195	100	
Lake Alice	13.8	5.6	0.0	2.2	5.3	3.0	3.8	0.0	2.8	4.5	6.5	3.4	47	191	100	
Minatare	60.8	38.8	5.3	18.1	8.1	30.6	38.5	16.9	13.9	38.1	53.8	26.2	89	205	100	
Kingsley-Sutherland																
BIG HORN DRAINAGE																
Bull Lake	155.0	--	--	--	--	0.0	42.8	38.8	15.7	67.7	46.7	42.3	30	110	100	
Pilot Butte	30.0	--	--	--	--	21.5	19.8	24.7	21.7	20.4	18.2	21.1	61	86	100	
SHOSHONE DRAINAGE																
Shoshone	456.6	318.2	354.8	387.7	342.1	317.1	394.3	106.9	36.9	357.0	391.9	300.7	86	130	100	
SNAKE DRAINAGE																
Jackson Lake	847.0	348.6	206.0	331.5	504.2	430.6	620.8	492.7	332.1	462.8	429.0	415.8	51	103	100	
CHEYENNE DRAINAGE																
Belle Fourche	198.1	111.4	68.9	78.0	50.6	104.5	64.5	43.8	60.6	155.5	159.7	89.8	81	177	100	

*Some averages for shorter periods

*Estimated

